



DKT 10113

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Huai N. Cheng,
Simon Delagrave, Qu-Ming Gu,
Dan Michalopoulos and Dennis J. Murphy

Group Art Unit: 1731

Serial No.: 10/027,164

Examiner: unknown

Filed: December 20, 2001

For: LACCASE ACTIVITY ENHANCERS FOR PULP BLEACHING

Assistant Commissioner for Patents
Washington, D.C. 20231

Dear Sir:

INFORMATION DISCLOSURE STATEMENT

Relevant art for the above-referenced Application is submitted on the enclosed PTO form 1449. Pursuant to the duty of disclosure set forth in 37 C.F.R § 1.56 and in accordance with the provisions of 37 C.F.R§ § 1.97 and 1.98.

Copies of the above-noted documents are enclosed as is a completed copy of the PTO 1449 Form. Accordingly, the Examiner is respectfully requested to consider the documents and to indicate such consideration by returning a signed and initialed copy of the PTO-1449 Form.

It is pointed out that while this filing is more than three (3) months from the application filing date, this IDS is being filed before preparation of an Office Action and no fee should be due.


Should any fee be required, the undersigned hereby authorized the Commissioner to charge any fee necessary for the consideration of this statement, including any payment under 37 CFR 1.17(p), and to credit any

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overpayment to Hercules Incorporated's Deposit Account No. 08-1800. This document is submitted in duplicate for this purpose.

Should the Examiner have any matter unresolved by this response, he is invited to telephone the undersigned at the below listed telephone number in order to expedite prosecution.

Respectfully submitted,


Joanne Mary Fobare Rossi
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May 16, 2002
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| INFORMATION DISCLOSURE CITATION <i>(Use several sheets if necessary)</i> | | | | Docket Number (Optional) | | Application Number | | |
|---|-----|--|----------|---------------------------------------|-------|--------------------|------------------------------|----|
| | | | | DKT 10113 | | 10/027,164 | | |
| | | | | Applicant(s) Huai N. Cheng, et al. | | | | |
| Filing Date December 20, 2001 | | | | Group Art Unit 4731 | | | | |
| U.S. PATENT DOCUMENTS | | | | | | | | |
| *EXAMINER INITIAL | REF | DOCUMENT NUMBER | DATE | NAME | CLASS | SUBCLASS | FILED DATE IF APPROPRIATE | |
| | | 5,885,304 | 03/23/99 | Schneider et al. | | | | |
| | | 6,242,245 | 06/05/01 | M. Amann et al. | | | | |
| | | 6,103,059 | 08/15/00 | Call | | | | |
| | | 6,358,904 | 03/19/02 | Call | | | | |
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| | | | | Foreign Patent Documents | | | | |
| | | | | | | | | |
| | | 2,248,530 | 03/26/99 | Canada | | | | |
| FOREIGN PATENT DOCUMENTS | | | | | | | | |
| | REF | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUBCLASS | Translation | |
| | | | | | | | YES | NO |
| | | WO 94/29510 | 06/16/94 | (See also US 6,103,059) | | | | ✓ |
| | | WO 94/29425 | 12/22/94 | | | | | ✓ |
| | | WO/97/06244 A | 02/30/97 | | | | | ✓ |
| | | WO99/32652 | 01/07/99 | | | | | |
| | | 2,304,107 A | 03/12/97 | United Kingdom | | | | |
| OTHER DOCUMENTS <i>(Including Author, Title, Date, Pertinent Pages, Etc.)</i> | | | | | | | | |
| | | H. P. Call, I. Mucke, HISTORY, OVERVIEW AND APPLICATIONS OF MEDIATED LIGNOLYTIC SYSTEMS, ESPECIALLY LACCASE-MEDIATOR-SYSTEMS (LIGNOZYME® -PROCESS), Journal of Biotechnology, 53, 163-202 (1997) | | | | | | |
| | | A. E. Porter, et al., SPECTROSCOPIC STUDIES AND ELECTRONIC STRUCTURE DESCRIPTION OF THE HIGH POTENTIAL TYPE 1 COPPER SITE IN FUNGAL LACCASE; IN SIGHT INTO THE NE Journal of American Chemical Society, 121, 7138 (1999) | | | | | | |
| EXAMINER | | | | DATE CONSIDERED | | | | |
| EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. | | | | | | | | |

INFORMATION DISCLOSURE CITATION*(Use several sheets if necessary)*

Docket Number (Optional)

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Applicant(s)

Huai N. Cheng et al.

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Group Art Unit

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*EXAMINER
INITIALOTHER DOCUMENTS *(Including Author, Title, Date, Pertinent Pages, Etc.)*

P. Bajpai, TOPICAL PAPER, APPLICATIONS OF ENZYMES IN THE PULP AND PAPER INDUSTRY, Biotechnology Prog. 15, 147-157 (1999)

K. Li, R. F. Helm., K. E Eriksson, Biotechnology Application Biochem. (1998) 27, 239-243

K. Li, F. Xu, K. E. Eriksson, Application Environmental Microbiology, 65, 2654-2660 (1999)

R. Bourbonnais, M. G. Paice, ENZYMATIC DELIGNIFICATION OF KRAFT PULP USING LACCASE AND A MEDIATOR, Tappi Journal., 79, pages 199-204 (1996)

R. Bourbonnais, M. G. Paice, B. Freiermuth, E. Brodie, S. Borneman, REACTIVITIES OF VARIOUS MEDIATORS AND LACCASES WITH KRAFT PULP AND LIGNIN MODEL COMPOUNDS, Applied and Environmental Microbiology, 63, pages 4627-4632 (1997)

Andrzej. Leonowicz, et al., FUNGAL LACCASE; PROPERTIES AND ACTIVITY ON LIGNIN, Journal of Basic Microbiology, 41,(304) 185-227 (2001)

EXAMINER

DATE CONSIDERED

*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.